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Application of: Robert A. Veschi
Serial No.: 09/777,350
Filed: February 5, 2001

IN THE CLAIMS

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Please amend the claims as follows:

1-21. (Canceled)

22. (Currently Amended) The ~~circuit~~ device of claim 36 ~~[[21]]~~, wherein said plurality of frequency filters are comprise bandpass ~~band-pass~~ filters.

23. (Currently Amended) The ~~circuit~~ device of claim 36 ~~[[21]]~~, further comprising
a wherein said plurality of capacitors, one for each of said plurality of frequency filters, for filtering filter noise in said audio input signal to prevent false detects of incoming telephone calls.

24-35 (Canceled)

36. (Currently Amended) An Internet telephony device, comprising:
a first output device and a second output device, distinct from said first output device;
an input device constructed and adapted to receive an audio input signal, and
circuitry constructed and adapted to analyze said audio input signal,
wherein said circuitry is constructed and adapted to detect in said audio input signal a multi-frequency signal indicative of an incoming call, and automatically to send

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an output signal to a said first output device when said multi-frequency signal corresponding to an incoming call is detected, and otherwise to send said audio input signal to said second output device, A device as in claim 31, wherein said circuitry comprises:

a plurality of frequency filters, each corresponding to a different frequency indicative of said multi-frequency signal, and each filter constructed and adapted to detect a different frequency indicative of said multi-frequency signal,

a plurality of capacitors, one corresponding to each of said plurality of frequency filters, each connected to a different one of said plurality of frequency filters, for filtering out signals having certain durations;

a plurality of switches connected in series, one corresponding to each of said plurality of frequency filters, each connected to a different one of said plurality of capacitors, for selectively causing said audio signal to be routed to the first output device when said frequency indicative of said multi-frequency signal are detected for a sufficient period of time by said plurality of frequency filters in conjunction with said plurality of capacitors, and otherwise causing said audio signal to be routed to said second output device.

37-39. (canceled)

40. (Currently Amended) A device method as in claim 36 [[31]] wherein said first output device is a speaker and wherein said second output device is a headset.

Please add the following new claims

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41. (New) A device as in claim 36 wherein the multi-frequency signal comprises 520 Hz and 650 Hz signals.

42. (New) A device as in claim 36 wherein the multi-frequency signal comprises a ring signal.

43. (New) A device as in claim 36 wherein said logic circuitry detects the presence of at least two distinct simultaneous frequencies for a duration indicative of said multi-frequency signal.

44. (New) A device as in claim 36 wherein said first output device is a speaker.

45. (New) A device as in claim 36 wherein said second output device is a headset.

46. (New) A device as in claim 36 wherein said first output device and said second output device are selected from the group comprising: a speaker and a headset.

47. (New) An Internet telephony device, comprising:
an input device constructed and adapted to receive an audio input signal, and
logic circuitry constructed and adapted to analyze a central processing unit with logic for analyzing said audio input signal, wherein said logic circuitry detects in said audio input signal the presence of at least two distinct simultaneous frequencies for a duration indicative of a multi-frequency signal indicative of an incoming call, the multi-frequency signal comprising 520 Hz and 650 Hz signals;

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wherein said circuitry detects in said audio input signal said multi-frequency signal in said audio input signal, and sends an output signal to a first output device when said multi-frequency signal corresponding to an incoming call is detected, and otherwise sends said audio input signal to a second output device, distinct from said first output device, when said signal corresponding to an incoming call is not detected, wherein said first output device and said second output device are selected from the group comprising: a speaker and a headset, and

wherein said circuitry comprises:

a plurality of bandpass filters, each corresponding to a different frequency indicative of said multi-frequency signal, each filter constructed and adapted to detect a different frequency indicative of said multi-frequency signal,

a plurality of capacitors, one corresponding to each of said plurality of frequency filters, each capacitor connected to a different one of said plurality of frequency filters, said capacitors for filtering out signals having certain durations;

a plurality of switches connected in series, one corresponding to each of said plurality of frequency filters, each connected to a different one of said plurality of capacitors, for selectively causing said audio signal to be routed to said first output device when said frequency indicative of said multi-frequency signal are detected for a sufficient period of time by said plurality of frequency filters in conjunctions with said plurality of capacitors, and otherwise causing said audio signal to be routed to said second output device.

48. (New) A device as in claim 47 wherein the multi-frequency signal comprises a ring signal.

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49. (New) An Internet telephony device, comprising:
an input device constructed and adapted to receive an audio input signal, and
logic circuitry constructed and adapted to analyze a central processing unit with
logic for analyzing said audio input signal, wherein said logic circuitry detects in said
audio input signal the presence of at least N distinct simultaneous frequencies for a
duration indicative of a multi-frequency signal indicative of an incoming call, where
 $N \geq 2$;

wherein said circuitry detects in said audio input signal said multi-frequency
signal in said audio input signal, and sends an output signal to a first output device when
said multi-frequency signal corresponding to an incoming call is detected, and otherwise
sends said audio input signal to a second output device, distinct from said first output
device, when said signal corresponding to an incoming call is not detected, and

wherein said circuitry comprises:

at least N frequency filters, each corresponding to a different frequency indicative
of said multi-frequency signal, each filter constructed and adapted to detect a different
frequency indicative of said multi-frequency signal,

at least N capacitors, one corresponding to each of said plurality of frequency
filters, each capacitor connected to a different one of said plurality of frequency filters,
said capacitors for filtering out signals having certain durations;

at least N switches connected in series, one corresponding to each of said plurality
of frequency filters, each connected to a different one of said plurality of capacitors, for
selectively causing said audio signal to be routed to said first output device when said
frequency indicative of said multi-frequency signal are detected for a sufficient period of
time by said plurality of frequency filters in conjunctions with said plurality of capacitors,
and otherwise causing said audio signal to be routed to said second output device.

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50. (New) A device as in claim 49 wherein said first output device and said second output device are selected from the group comprising: a speaker and a headset.

51. (New) A device as in claim 49 wherein the multi-frequency signal comprises 520 Hz and 650 Hz signals.

52. (New) A device as in claim 49 wherein the multi-frequency signal comprises a ring signal.

53. (New) A device as in claim 49 wherein the frequency filters comprise bandpass filters.

54. (New) A device as in claim 36 wherein at least one of the plurality of frequency filters corresponds to a harmonic of a frequency of a signal in the multi-frequency signal.

55. (New) A device as in claim 51 wherein one of the plurality of frequency filters corresponds to the fundamental of the 520 Hz signal and another of the plurality of frequency filters corresponds to a fifth harmonic of the 650 Hz signal.

56. (New) A device as in claim 49 where $N = 2$.

57. (New) A device as in claim 49 where the value is N is selected from the numbers 2, 3, 4 and 5.

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58. (New) An Internet telephony device, comprising:
an input device for receiving constructed and adapted to receive an audio input signal, and

logic circuitry constructed and adapted to analyze a central processing unit with logic for analyzing said audio input signal, wherein said logic circuitry detects in said audio input signal the presence of two distinct simultaneous frequencies for a duration indicative of a multi-frequency signal indicative of an incoming call;

wherein said circuitry detects in said audio input signal said multi-frequency signal in said audio input signal, and sends an output signal to a first output device when said multi-frequency signal corresponding to an incoming call is detected, and otherwise sends said audio input signal to a second output device, distinct from said first output device, when said signal corresponding to an incoming call is not detected, and

wherein said circuitry comprises:

two frequency filters, each corresponding to a different frequency indicative of said multi-frequency signal, each filter constructed and adapted to detect a different frequency indicative of said multi-frequency signal,

two capacitors, one corresponding to each of said plurality of frequency filters, each capacitor connected to a different one of said plurality of frequency filters, said capacitors for filtering out signals having certain durations;

two switches connected in series, one corresponding to each of said plurality of frequency filters, each connected to a different one of said plurality of capacitors, for selectively causing said audio signal to be routed to said first output device when said frequency indicative of said multi-frequency signal are detected for a sufficient period of

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time by said plurality of frequency filters in conjunctions with said plurality of capacitors, and otherwise causing said audio signal to be routed to said second output device.

59. (New) A device as in claim 58 wherein the multi-frequency signal comprises a ring signal.

60. (New) A device as in claim 58 wherein the multi-frequency signal comprises 520 Hz and 650 Hz signals.

61. (New) A device as in claim 58 wherein the frequency filters comprise bandpass filters.

62. (New) A device as in claim 58 wherein one of the plurality of frequency filters corresponds to a harmonic of a frequency of a signal in the multi-frequency signal.

63. (New) A device as in claim 60 wherein one of the two frequency filters corresponds to the fundamental of the 520 Hz signal and the other of the two frequency filters corresponds to a fifth harmonic of the 650 Hz signal.